

NOTES ON MALESIAN ZINGIBERACEAE

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ABSTRACT. Miscellaneous new combinations are made, three new species described and little-understood species discussed in Malesian Zingiberaceae. The new species are: *Cenolophon argenteum* Burtt & Smith; *Geanthus longipetiolatus* Burtt & Smith and *G. pubescens* Burtt & Smith. New combinations are made in *Achasma*, *Cenolophon*, *Elettaria*, *Geanthus*, *Geocharis*, *Nicolaia*, *Plagiostachys* and *Scaphochlamys*.

Achasma nasutum (K. Schum.) Loes. in Pflanzenfam. 2 Aufl., 15A: 596 (1930). Basionym: *Amomum nasutum* K. Schum. in Bot. Jahrb. 27: 320 (1899) & Pflanzenr. 223 (1904).

Type: Sarawak, First Division, Kuching, viii 1865, *Beccari* 315 (FIR). Sarawak. Fourth Division, Tubao River, Bintulu, 1867, *Beccari* 4012 (FIR); First Division, Semengoh Forest Reserve, tube and lower part of lip pink, leafy shoot c. 3 m, 13 vii 1962, *Burt & Woods*, B. 2477 (E, SAR); *ibidem*, wholly red flowers, young inflorescence with labellum scarcely radiant, growing out later, tip bilobed, 24 vii 1967, *Burt & Martin*, B. 4721 (E, SAR).

Loesener was in some doubt as to the correctness of the above transfer. Study of the type material and the additional collections cited above enabled us to verify that *Amomum nasutum* K. Schum. should be placed in *Achasma*.

Achasma philippinense (Ridl.) Burtt & Smith, **comb. nov.**

Basionym: *Hornstedtia philippinensis* Ridl. in Govt. Lab. Publ. (Philip.) 35: 86 (1905) and Philip. Journ. Sc. 4: 175 (1909).

Lectotype: Philippines, Davao, Mindanao, *Copeland* 416 (n.v.).

Philippines, s.l., 1841, *Cuming* 1312 (FIR); Negros, vi 1908, *Elmer* 10270 (E).

Ridley, who did not accept *Achasma* Griff. as a genus, acknowledged that this species belongs to the same group as *Achasma megaloscheilos* Griff. *Achasma* is quite distinct from *Hornstedtia* because the base of lip and filament form a distinct tube above the petals; any difficulty about its limits is occasioned by the close affinity with *Nicolaia* Horan. and *Geanthus* Loes., but both these names are younger.

Alpinia glabra Ridl. in Journ. Str. Br. As. Soc. 32: 168 (June 1899) & 46: 244 (1906).

Type: Sarawak, First Division, Mt. Santubong, *Haviland* (presumably *H.* 444, K).

Syn.: *Alpinia flexistamen* K. Schumann in Bot. Jahrb. 27: 281 (Sept. 1899) & Pflanzenr. 328 (1904). Type: Sarawak, First Division, Mt. Matang, n.d. *Beccari* 1491 (FIR).

Sarawak: First Division, Mt. Matang, vii 1893, *Ridley* 11808 (K); Bidi, vii 1893, *Ridley* 11810 (K).

The type material of *A. flexistamen* has no mature flowers but the subulate lateral staminodes of Ridley's species appear to be absent. Otherwise, differences are slight and we have little hesitation in uniting the two names. A further Bornean species, *A. angustifolia* K. Schum. (Type: Mt. Matang, Beccari 3602, FIR), is perhaps no more than a narrow leaved variant.

We have other material related to this species from various parts of Sarawak. Further collections and study is needed before any decisions can safely be taken on the number of species involved.

Alpinia ligulata K. Schum. in Bot. Jahrb. 27: 275 (1899) & Pflanzenr. 326 (1904).

Syntypes: Sarawak, First Division, Pinindgiao, xi 1865, Beccari 987 (FIR); Mt. Matang, i 1866, Beccari 1307 (FIR).

Syn.: *A. reticosa* Ridl. in Journ. Str. Br. As. Soc. 46: 243 (1906). Type: Sarawak, Bau, Ridley (n.v.).

Schumann, who placed *A. ligulata* in his subgenus *Probolocalyx*, made no mention of the closely reticulated leaf sheaths which are clearly visible on the type material. The plants fit Ridley's description very well and there can be little doubt that *A. reticosa* is conspecific. The affinities of *A. ligulata* are less easy to determine. The very small flowers and branching inflorescence indicate subgenus *Alpinia* sect. *Alpinia*, but the flowers are borne singly on the rachis. Neither author makes any reference to bracts (or bracteoles); in fact some may be observed but they are obviously soon deciduous. They take the form of tubular structures round the unopened flowers which presumably split and fall as the corolla opens. There is no reason to suppose that they are in anyway related to the tubular bracteoles of subgenus *Dieramalpinia* which are characteristically persistent.

Alpinia mutica Roxb. in Asiat. Research. 11: 354 (1810); K. Schum. in Pflanzenr. 327 (1904); Val. in Ic. Bog. 2: 299, t 191 (1906).

Type: Cult. Calcutta, originally from Penang.

Syn.: *Renealmia mutica* (Roxb.) Salisb. in Trans. Hort. Soc. 1: 280 (1812).

Alpinia korthalsii K. Schum. in Pflanzenr. 327 (1904). Syntypes: Kalimantan, Pontiak, Sungei Upanang, v 1867, Beccari 3557 (FIR); Bangarmassing, generally distributed, flowers white, labellum veined with reddish-purple, stamen yellow, 1857-8, Motley 234 (K); Korthals (n.v.)

Languas mutica (Roxb.) Degener, Fl. Hawaii Fam. 76 (1932).

Catimbium muticum (Roxb.) Holtt. in Gard. Bull. Sing. 13: 150 (1950).

Schumann separated *A. korthalsii* from *A. mutica*, both of which he placed in his subgenus *Probolocalyx*, for two reasons; the slightly larger flowers of the former and the length of the rhachis below the inflorescence (peduncle), which is up to 6 cm in *A. korthalsii* and 1 cm in *A. mutica*. Cultivated material of the latter (E) shows this to be a variable character. Valetton's plant, correctly figured by him as *A. mutica* originally came from Borneo; we have little hesitation in uniting the two species. No bracteoles are to be seen on



FIG. 1. *Amomum oliganthum* K. Schum. (Burtt & Woods, B. 2478) A, primary bract $\times 1$; B, apex of primary bract $\times 2$; C, flower and bracteole $\times 1$; D, bracteole $\times 1$; E, flower $\times 1$; F, calyx dissected $\times 1$; G, flower dissected $\times 1$; H, anther $\times 2$; I, anther from the side $\times 2$; J, stigma $\times 4$; K, ovary in T.S. $\times 2$ (from living material).

the type gathering of *A. korthalsii* (Beccari) and we conclude that they are quickly deciduous as in *A. mutica* and do not enfold the flower buds. Despite this feature, and the 3-4-flowered (not 1-2-flowered) cincinni, the affinity lies with the species of *Alpinia* subgen. *Catimbium* K. Schum. (= *Catimbium* sens. Holttum) as Holttum (Gard. Bull. Sing. 13: 150. 1950) has already pointed out.

Amomum compactum [Soland. ex] Maton in Trans. Linn. Soc. 10: 251 (1811); Roem. & Schult., Syst. Veg. 1: 28 (1817)—excl. syn. nonn.; Backer & Bakh. f., Fl. Jav. 3: 53 (1969).

Syn.: *A. kepulaga* Sprague & Burk. in Kew Bull. 1930, 25.

[*A. cardamomum* auct.; Roxb., Pl. Coast Coromand. 3: 21, t. 227 (1819)].

We agree with Bakhuizen that *Amomum compactum* is the correct name for this plant. Unfortunately it was not described in Maton's paper, although he mentions that he had seen an illustration, made while Banks was in Java, and herbarium specimens. The name is validated only by the references to Bontius, (Hist. Nat. Med. Ind. Or., ed. Piso, 126 cum fig. sed excl. caps., 1658), which does not make a very satisfactory type. Roemer & Schultes do not quote Solander or Maton, but there can be little doubt that it is Solander's name that they are using. They cite the reference to Bontius, but did not have a very clear idea of the species and some of their synonymy (e.g. *Amomum racemosum* Lam.) belongs to *Elettaria cardamomum*.

Amomum oliganthum K. Schum. in Bot. Jahrb. 27:321 (1899) & Pflanzenr. 244 (1904). Fig. 1.

Type: Sarawak, First Division, Mt. Matang, xii 1866, *Beccari* 2946 (FIR).

Syn.: *A. hewittii* Ridl. in Journ. Str. Br. As. Soc. 46: 238 (1906). Syntypes: Sarawak; Matang, *Ridley* (n.v.); Santubong, *Hewitt* (n.v.)

Sarawak. First Division, Semengoh Forest Reserve, bracts green, flowers dull orange yellow, base and apex of lip somewhat darker, leafy shoot c. 2 m, 13 vii 1962, *Burt & Woods*, B. 2478 (E, SAR); cult. R.B.G. Edin., ix 1968, C. 8077.

A. gracilipes K. Schum. (Pflanzenr. 4: 252, 1904) was based on an unlocalized Bornean specimen collected by Korthals; it is probably conspecific.

Cenolophon argenteum Burt & Smith, *species nova* *C. versicolori* (K. Schum.) Burt & Smith ob folia subtus dense pubescentia, ob racemos pubescentes et ob antheram bene cristatam affinis, sed foliis brevioribus angustioribusque floribus breviter pedicellatis, staminodiis lateralibus brevioribus, labello integro leviter fimbriato-marginato differt. (Fig. 12, Notes R.B.G. Edinb. 31: 213, 1972).

Herba rhizomatosa 2 m usque alta. *Folia* vaginis breviter pubescentibus inter venas transverse argenteo-lineatis; ligula 0.2–0.3 cm, biloba, lobis rotundatis dense pubescentibus; lamina sessilis 23 × 6 cm usque, caudato-acuminata, ad basin attenuata, super glabra vel parce scabrida subtus molliter denseque pilis argenteis brevibus appressis induta. *Inflorescentia* in caule folioso terminalis, 12 cm usque longa, haud ramosa, dense tomentosa. *Flores* solitariae, pedicellis brevibus c. 2 mm longis suffulti. *Bracteae* primariae caducae vel fortasse fere carentes, 1 × 0.1 cm, acutae. *Bracteolae* nullae. *Calyx*, ovario incluso, 2–2.5 cm, trilobus, triente superiore unilateraliter fissus, pubescens. *Corolla* tubo calyci aequilongo extra pubescente intus ad faucem leviter pubescente; lobi extra pubescentes, dorsalis 1.5–2 cm longus c. 0.4 cm latus marginibus incurvis et apicibus cucullatis, laterales paulo breviores c. 0.3 cm lati plus minusve plani. *Labellum* ovatum, 2–2.5 × 1.5–2 cm, ochroleucum vel virescens, rubro-lineatum, margine valide crispatum (fere fimbriatum), integrum, extra plus minusve scabridum, intus glabrum vel pilis paucis ad basin versus pubescens. *Staminodia* lateralialia subulata, 0.4 cm longa, rubra, glandulosa, tumulo dense pubescente basi praedita. *Filamentum* 1 cm longum, dorso et marginibus pubescens; anthera 0.4–0.5 cm longa, thecis parallelis pubescentibus, crista 0.3–0.4 cm longa

fimbriata interdum obscure triloba glandulosa. *Ovarium* velutinum triloculare, ovulis in placentis axilibus numerosis. *Glandes* epigyni ventraliter connati, c. 0.3 cm longi et (explanati) 0.4 cm lati, crassi, irregulariter dentati. *Stylus* filiformis, leviter hirsutus; stigma infundibuliforme, ore ciliatum. *Fructus* ignotus.

Type: Sarawak, Fifth Division, Bakelalan to Gunong Murud, above S Komap, flowers greenish, lip red-lined and staminodes red, 23 ix 1967, *Burt & Martin*, B. 5166 (holo. E. iso; SAR).

Sarawak. Fourth Division, Gunong Mulu c. 1200 m, flowers cream, lip red-lined, fimbriate; staminodes blood red, stigma white, 2 m high with c. 15 leaves, leaves silvery below, sheaths silver mottled, 17 vi 1962, *Burt & Woods*, B. 2181 (E, SAR.).

The handsome silvery indumentum is the most striking feature of this species. In only one respect does it differ from *Cenolophon* Bl. as circumscribed by Holttum (1950); in *C. argenteum* the majority of the flowers appear to be ebracteate, in *Cenolophon* sens. Holttum the bracts are usually small, not deciduous but usually breaking off above the base. Further observations from living material should be made but plants of *C. argenteum* in cultivation at Edinburgh have not yet flowered.*

Cenolophon argenteum Burt & Smith vel. aff.

Sarawak: Fourth Division, Benarat, S flank facing Melinau, steep slope at foot of limestone cliff, flowers pale apricot with 2 blood red patches at base of lateral lobes [staminodes], upper edges of labellum marked blood red, 24 vi 1962, *Burt & Woods*, B. 2268 (E, SAR).

The indumentum of B. 2268 is as in *C. argenteum* but the horizontal silver markings of the leaf sheaths are much more distinct. The essential differences from *C. argenteum* are the distinctly petiolate leaves (petiole c. 1.5 cm), the lateral staminodes which are not subulate but take the form of shorter, more or less square projections and the colouring of the flowers.

***Cenolophon versicolor* (K. Schum.) Burt & Smith, comb. nov.**

Syn.: *Alpinia versicolor* K. Schum., Pflanzenr. 332 (1904).

Syntypes: Celebes; near Masarang 12 v 1894, *Sarasini* 202 (n.v.); near Bojong, *Warburg* 15735 (n.v.).

Alpinia versicolor was placed in subgen. *Probolocalyx* by K. Schumann. Holttum has already pointed out that several species in *Probolocalyx* may prove to belong to *Cenolophon*. Although no material has been available for examination, it seems clear from Schumann's description that this species is more properly associated with *Cenolophon* having its flowers borne singly on the main axis of the inflorescence. K. Schumann paid little attention to these important characters of the inflorescence and his section *Cenolophon* was rather characterized by the absence of an anther-crest.

* Since the above notes were written, *Cenolophon argenteum* has flowered at Edinburgh (vii 1971, C. 8090). We find that there is a very thin translucent bract associated with each flower; at the base of the inflorescence the bracts are up to 0.6 cm long and quickly deciduous, towards the apex they diminish to less than 0.1 cm and, even in living material, might very easily be overlooked. The freshly opened inflorescence has a pronounced scent of ginger.

Elettaria surculosa (K. Schum.) Burtt & Smith, **comb. nov.** (Fig. 2, Notes R.B.G. Edinb. 31: 183, 1972).

Basionym: *Amomum surculosum* K. Schum. in Bot. Jahrb. 27: 323 (1899).

Type: Sarawak, First Division, Mt. Matang, v 1868, *Beccari* 1586 (FIR).

Syn.: *Cyphostigma surculosum* (K. Schum.) K. Schum., Pflanzenr. 273 (1904).

Elettariopsis surculosa (K. Schum.) Loes., Pflanzenfam. 2 Aufl. 15a: 603 (1930).

Taxonomic syn.: *Amomum stoloniferum* K. Schum. in Bot. Jahrb. 27: 322 (1899). Type: Sarawak, First Division, near Kuching, viii 1865, *Beccari* 365 (FIR).

Cyphostigma stoloniferum (K. Schum.) K. Schum., Pflanzenr. 273 (1904).

Elettariopsis stolonifera (K. Schum.) Loes., Pflanzenfam. 2 Aufl., 15a: 603 (1930).

Lectotype species of: *Amomum* subgen. *Mastigamomum* K. Schum. in Bot. Jahrb. 27: 301, 322 (1899).

Sarawak. First Division Mt. Matang, inflorescence prostrate to 1.3 m, leafy shoot to 2 m; 14 vii 1962, *Burtt & Woods*, B. 2504 (E, SAR); prostrate inflorescence, flowers white with greenish-yellow centre, leafy shoots 1.6 m, 7 ix 1967, *Burtt & Martin*, B. 5144 (E, SAR). Third Division, Bukit Raya, near Pelagus Rapids on Rejang, 4000–5000 m, flowers white with yellow in centre of labellum, 20 vii 1962, *Burtt & Woods*, B. 2577 (E); Sungei Melinau near Nanga Tunoh, white labellum with yellowish green band in lower part, 3 viii 1967, *Burtt & Martin*, B. 4773 (E, SAR).

Neither Loesener nor Holtum agreed with Schumann's enlargement of the distinctive Singhalese genus *Cyphostigma* Benth. to include *Elettariopsis* Bak. Four species are currently referred to *Elettariopsis*; the identity of at least two remains uncertain and it seems probable that further transfers to *Elettaria* should be made (Holtum in Gard. Bull. Sing. 13: 237, 1950).

Elettariopsis stenosphon (K. Schum.) Burtt & Smith, **comb. nov.**

Basionym: *Amomum stenosphon* K. Schum. in Bot. Jahrb. 27: 320 (1899) & Pflanzenr. 244 (1904).

Type: Sarawak, Second Division, Batang Lupar, Marop, iv 1867, *Beccari* 3311 (FIR).

The rather short 2–3-leaved shoots of this species are characteristic of *Elettariopsis* Bak. (in Hk. f., Fl. Brit. Ind. 6: 251, 1892), whose relationship to *Amomum* is fully discussed by Holtum (in Gard. Bull. Sing. 13: 237, 1950).

Geanthus fimbriobracteatus (K. Schum.) Burtt & Smith, **comb. nov.**

Basionym: *Amomum fimbriobracteatum* K. Schum. in Bot. Jahrb. 27: 317 (1899) & Pflanzenr. 252 (1904).

Type: Sarawak, Fourth Division, Tubao R., trib. of Bintulu, viii 1867, *Beccari* 3735 (FIR).

The following material may belong here:—

Sarawak, Third Division, SE Hose Mts. above Ulu Melinau Falls, flowers bright yellow except for very dark red and hard stigma, 21 viii 1967, *Burt & Martin*, B. 5020 (E, SAR). Fourth Division, Gunong Api limestone, Ulu Melinau, 5 m tall, calyx red, basal half of corolla tube white, upper half yellowish, petals rich yellow, style white with crimson stigma, 10 ix 70, *Chai S.* 30376 (SAR, E). Fifth Division, route from Bakelalan to Gunong Murud, flowers wholly yellow except for dark red anther and stigma; inflorescence basal, surrounded by reddish-brown bracts, not elongating with age, leafy shoot up to 5 m, 1 x 1967, *Burt & Martin*, B. 5342 (E, SAR).

Schumann placed *Amomum fimbriobracteatum* in his series *Integrae* of *Amomum* section *Amomum*. Examination of the type material shows this species to have the inflorescence and flower structure of *Geanthus*. The deeply split bracteole is tubular, the calyx exceeds the corolla tube and the lower part of the labellum is united with the base of the filament into a distinct tube (c. 1–1.3 cm). Furthermore, the outside of the inflorescence bears sterile bracts which merge gradually into flower-bearing primary bracts. Unlike *G. pubescens* and *G. longipetiolatus* (described below) the free part of the labellum exceeds the stamen by up to 1 cm and the well formed anther crest is, as far as is known, unique in *Geanthus*. No conspicuous crest is evident in the recent material cited above, both have the very large leaves of *G. fimbriobracteatus*, but B. 5342 lacks the distinctly pubescent leaf margins of the type plant. More field work is obviously needed, in order that the range of variation within the species, particularly with regard to labellum length and the formation of anther crests, can be judged.

***Geanthus longipetiolatus* Burt & Smith, species nova**, quoad inflorescentia et flores *G. fimbriobracteato* et *G. pubescenti* similis, sed ab ambobus foliis longipetiolatis et omnino glabris differt.

Herba rhizomatosa, caulibus foliosis 2.5 m usque altis, inflorescentiis basalibus. *Folia* vaginis parce pubescentibus, ligulis 3 cm usque longis dense pubescentibus coriaceis; lamina petiolo \pm glabro 10 cm usque longo suffulta, anguste elliptica, 70×12 cm usque, glabra, breviter caudata, basi plus minusve rotundata. *Inflorescentia* bracteis sterilibus c. 3.5×2 cm pubescentibus marginibus paulo ciliatis apice cucullatis (0.3–0.6 cm); bracteae primariae sterilibus similes sed angustiores, ad mediam inflorescentiam descrentes, omnes florem unum plus minusve sessilem bracteolatum suffulcientes; *bracteolae* tubulares, 2.5–3 cm longae, pubescentes, unilateraliter fissae, breviter trilobatae. *Calyx* ovario incluso 6 cm usque, parte superiore 2 cm longa unilateraliter fissus, pubescens, trilobatus, lobis triangularibus 1 cm usque longis acumine caudato incluso. *Corolla* tubo calyci brevior c. 3.5×0.3 cm glabro; lobi rubescentes, \pm ligulati, 3×0.5 cm usque, apice rotundati, glabri, dorsalis lateralibus paulo latior. *Staminodia* lateralia nulla. *Labellum* luteum, basi cum filamento tubum 1.5 cm longum formans, parte libera erecta lateribus antheram amplexentibus 1.5 cm usque longa ovata apice crispata. *Filamentum* parte libera 0.5 \times 0.4 cm plana glabra; anthera rubra, c. 0.6 cm longa, thecis \pm parallelis,

pubescens, connectivo truncato minute cristato. *Stylus* linearis; stigma rubrum, durum, transverse ellipticum. *Glandes* epigynae c. 0.5×0.5 cm, inter se liberae. *Ovarium* pubescens 0.6×0.4 cm, triloculare, placentis axilibus, ovulis numerosis. *Fructus* ignotus.

Type: Sarawak, Fifth Division, route from Bakelalan to Gunong Murud, Camp IV, 2000 m, petals light red, labellum bright yellow, stamen and stigma red, leafy shoot c. 3 m, 2 x 1967, *Burt & Martin*, B. 5343 (holo. E, iso. SAR).

The glabrous, long petiolate leaves are the most distinctive feature of this species. The flowers are larger than those of *G. pubescens* but have a similarly short labellum and the anther shows only a rudimentary, and consequently easily overlooked, crest.

Geanthus pubescens Burt & Smith, *species nova* *G. fimbriobraceato* (K. Schum.) Burt & Smith inflorescentia et floribus similes sed foliis subtus pubescentibus marginibus bractearum conspicue pubescentibus, labello brevior et anthera ecristata. (Fig. 17A, Notes R.B.G. Edinb. 31: 223, 1972).

Herba rhizomatosa, caulibus foliosis 1 m altis. *Folia* vaginis parce pubescentibus; ligula 2 cm usque longa, pubescens, coriacea, integra; lamina petiolo 3 cm usque longo pubescente suffulta, elliptica, $40-45 \times 7-8.5$ cm, supra glabra, subtus praecipue ad costam pubescens, apice breviter caudata, basi plus minusve attenuata. *Inflorescentia* basalis, pedunculo ad 5 cm longo vaginis squamosis imbricatis in bracteas steriles involucri transeuntibus oblecto; bracteae steriles ovatae $4 \times 2-3$ cm usque rotundatae vel subacutae extra breviter pubescentes marginibus villosis; bracteae primariae angustiores, ad mediam inflorescentiam decrescentes, sterilibus minus pubescentes sed marginibus apicem subacutum versus dense villosis, omnes florem unum sessilem bracteolatum suffulcientes; bracteola tubularis, 3 cm usque longa, unilateraliter profunde fissa, acuta, pubescens. *Calyx* cum ovario pubescens, 5 cm usque, superne per 2 cm unilateraliter fissus. *Corolla* lutea; tubus calyce brevior, c. 2.5×0.5 cm, glaber; lobi ligulati c. 3×0.5 cm, apice rotundati, glabri. *Staminodia* lateralialia o. *Labellum* luteum, inferne per c. 1 cm cum basi filamenti tubum formans, parte libera erecta lateribus antheras amplectentibus 1-1.3 cm longa ovata paulo emarginata apice leviter pubescente. *Filamenti* pars libera 0.3×0.3 cm, plana, glabra; anthera rubra 0.8-0.9 cm longa, thecis parallelis pubescentibus, connectivo plus minusve truncato (obscure trilobo) ecristato. *Stylus* filiformis; stigma rubrum, durum, transverse ellipticum. *Glandes* epigynae c. 0.4 cm longae, unilateralliter fissae, irregulariter dentatae. *Ovarium* pubescens c. 0.4×0.3 cm, triloculare, placenta axili et ovulis numerosis instructum. *Fructus* ignotus.

Type: Sarawak, Fifth Division, route from Bakelalan to Gunong Murud below Camp IV, 2000 m, streamside, yellow flower except for reddish calyx and red anther and stigma, 4 x 1967, *Burt & Martin*, B. 5366 (holo. E, iso. SAR).

This species is easily distinguished by the pubescent leaf undersurface and conspicuously ciliate margined bracts. In all parts it is a smaller plant than *G. fimbriobraceatus* and unlike that species the lip barely exceeds the stamen in length.

***Geocharis radicalis* (Val.) Burt & Smith, comb. nov.**

Basionym: *Rhynchanthus radicalis* Val. in Bull. Jard. Bot. Buitenz. ser. 3, 3: 141, t. 7 f. 1-6 (1921).

Type: West Sumatra, East Coast (Deli), above Bandar-baroe in forest, c. 1000 m, common, *Lorzing* 5912 (BOG?—n.v.).

Valeton's description and figures leave no doubt as to the correct generic position of this plant.

***Nicolaia pyramidosphaera* (K. Schum.) Burt & Smith, comb. nov.**

Basionym: *Phaeomeria pyramidosphaera* K. Schum. in Bot. Jahrb. 27: 306 (1899) & Pflanzenr. 263 (1904).

Syntype: SW Kalimantan, Pontianak, Sungei Kanta, v 1867, *Beccari* 3452 (FIR).

***Plagiostachys crocydocalyx* (K. Schum.) Burt & Smith, comb. nov.**

Basionym: *Alpinia crocydocalyx* K. Schum. in Bot. Jahrb. 27: 28 (1899) & Pflanzenr. 310 (1904).

Syntypes: Sarawak, First Division, Suil, Kuching, x, *Beccari* s.n. (K); Batang Lupar, Marop, v 1967, *Beccari* 3477 (FIR).

P. crocydocalyx is the sole representative of Schumann's *Alpinia* subgenus *Autalpinia* section *Pycnopyramis*. The elongated inflorescence is pushed out from the leaf sheaths laterally and the calyx (and presumably the bracteoles—Schumann makes no mention of these) decay early. This decay of the bracteoles and calyx is apparently the source of the copious mucilage which covers the inflorescence of *Plagiostachys* at flowering time.

***Scaphochlamys polyphylla* (K. Schum.) Burt & Smith, comb. nov.**

Basionym: *Haplochorema polyphyllum* K. Schum., Pflanzenr. 88 (1904).

Type: Sarawak, First Division, Lundu, *Beccari* 2324 (FIR).

Syn.: *Gastrochilus bractescens* Ridl. in Journ. Str. Br. Roy. As. Soc. 54: 57 (1910). Type: Sarawak, Lundu, 1908, *Foxworthy* 42 (SING).

Boesenbergia bractescens (Ridl.) Merr. in Enum. Born. Pl. 122 (1921).

Sarawak. First Division, Bako National Park, Telok Tajor, *Purselove* 4949 (K).

Scaphochlamys has not been previously recorded from outside the Malay Peninsula and peninsular Thailand. *Gastrochilus laxiflorus* Val. (in Bull. Jard. Bot. Buitenz. ser. 2, 26: 100. 1918), described from Borneo, Mt. Opi (*Teysmann* 10916) is also a *Scaphochlamys* and probably not distinct from *S. polyphylla*.

Zingiber zerumbet* cv. *Darceyi

Syn.: *Zingiber darceyi* hort.; Veitch, Cat. 1890: 13; Wien. Ill. Gart. Zeit. 1890: 398; Garden 38: 43 (1890); Kew Bull. 1891, App. 2: 54 (1891); Roy. Hort. Soc. Gard. Dict. 4: 2310 (1951).

This is a ginger with variegated leaves, and none of the descriptions of *Z. darceyi* that we have traced do more than describe this variegation. For

some time we had a plant at Edinburgh which was obviously wrongly named as *Curcuma amada*; it flowered in 1969 and was identified as *Zingiber zerumbet*. More recently, Mr Bob Cranston has pointed out to us that the plant fits very well with the description of *Z. darceyi*. There seems no doubt that this is what it is. A garden name for the plant is desirable and the best course is to transfer the epithet *darceyi* to the cultivar level.

Z. darceyi was introduced to this country from Sydney Botanic Garden and was said to come from the South Sea Islands. *Z. zerumbet* has become widely dispersed by man, and may easily have reached so far.